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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,143	01/20/2004	Lewis R. Dove	10020701-1	4168

7590 05/10/2005

AGILENT TECHNOLOGIES, INC.  
Legal Department, DL429  
Intellectual Property Administration  
P.O. Box 7599  
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EXAMINER

LEE, BENNY T

ART UNIT PAPER NUMBER

2817

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE  
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10/ 762143

ARTICLE 1

DATE

RECEIVED

1/24

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire Three (3) month(s), \_\_\_\_\_ days from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                  |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.      | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/> _____   |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-20 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2. ☐ Claims \_\_\_\_\_ have been cancelled.

3. ☐ Claims \_\_\_\_\_ are allowed.

4. ☒ Claims 1-5, 7; 8-14; 15-20 are rejected.

5. ☒ Claims 6, 10 are objected to.

6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

7. ☐ This application has been filed with Informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_ Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_ has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed \_\_\_\_\_ has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_ filed on \_\_\_\_\_

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

SN 762143

U.S.GPO:1990-259-282

The disclosure is objected to because of the following informalities: page 1, paragraph (0000), note that updated status information for the related applications should be provided. Page 4, paragraph (0016), note that "is shielded 106, 108" appears to be an incomplete recitation. Page 5, paragraph (0021), and page 6, paragraph (0024), note that (see fig. 3) should follow "216" and "214", respectively. Pages 5, 6, paragraph (0025), note that – by step should precede (902, 904, 906, 908, 910), respectively

Appropriate correction is required.

The disclosure is objected to because of the following informalities: Note that for the following sequence of reference numbers, the respective sequence should be rewritten to indicate each number in the corresponding sequence (e.g. 400-404- should be – 400, 402, 404, etc.) (400-404); (500, 516); (602-624); (700-704). Moreover, the following reference labels need description relative to the corresponding figure: fig. 4 (200, 202, 210, 212, 218), fig. 8, all reference labels therein

Appropriate correction is required.

The use of the trademark Dupont G150 (page 6, paragraph 0024) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

In claim 20, note that it is unclear whether "each of the <sup>di</sup>dielectrics" is intended for each mound of dielectric or for each mound of dielectric and the "dielectric layer".

Claim 13 <sup>0</sup> contains the trademark/trade name Dupont <sup>1</sup> G 150 gold. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe conductive material and, accordingly, the identification/description is indefinite.

In claims 8, 9, 11, 14, note that the <sup>^^</sup> should precede "dielectric mound" for consistency with earlier recitations.

In claim 14, note that the plurality of should precede conductors, the should precede "second" and respective should precede thickfilms.

In claim 15, at b) and claim 19, note that <sup>--</sup>respective<sup>--</sup> should precede "mound" and "mounds," respectively.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 7, 11, 12, 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Arledge et al or Shimada et al in view of Kobayashi.

Note that Arledge et al and Shimada et al (figs. 9-13) each pertain to shielded coaxial line structures comprising: a lower ground layer (372 in Arledge et al; 35A in Shimada et al); a dielectric layer (312, in Arledge et al; 33 in Shimada et al) deposited over the lower ground layer; a signal conductor (332 in Arledge et al, 31 in Shimada et al) deposited over the dielectric layer; a dielectric mound or layer (342 in Arledge et al; 34 in Shimada et al) deposited over the signal conductor; and an upper shielding

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layer (382) in Arledge et al; <sup>36</sup> in Shimada et al) deposited over the dielectric mound and arranged to be electrically connected to the ground layer as to provide an enclosed shielding arrangement. However, each primary reference differs from the claimed invention in that plural shielded coaxial arrangements are not disclosed.

<sup>ba</sup> Kobayashi discloses plural shielded coaxial wiring patterns in a multi-layer structure of the type analogous to those in Arledge et al or Shimada et al.

Accordingly, it would have been obvious to have modified the shielded coaxial structures in either Arledge et al or Shimada et al to have respectively included a plurality of such shield coaxial structures in view of the exemplary teaching thereof by Kobayashi and especially in view of the analogous art nature of the references.

Moreover, note that Kobayashi discloses forming the shielded coaxial multi-layer structure through thick film deposition of dielectric and conductive layers. Thus this would have obviously suggested that the shielded coaxial structure of the combination would have likewise been formed through such a thick film processing as taught by the analogous art reference to Kobayashi.

Claims 3-5, 8, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada <sup>t</sup> et al in view of Kobayashi.

As described in the preceding rejection, it would have been <sup>obvious</sup> ~~obvious~~ to have formed a plurality of Shimada et al shielded coaxial structures in accordance with the teaching of Kobayashi for reasons set forth in the above rejection.

Note that with respect to figs. 11-13 in Shimada et al, the shield layer (36) is electrically connected to the lower ground layer (35) through vias (38, 37). Note in

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particular that vias (37) include flange shape pads on the surface of dielectric layer (33). Moreover, note that conductive traces (2) also electrically connected to the lower ground layer (35) through vias (38, 37). Note in particular that vias (37) include flange shape pads on the surface of dielectric layer (33). Moreover, note that conductive traces (2) also electrically connect the vias into a ground state condition (see fig. 11). Also note glass impregnated dielectric layers (see col. 9, ls 13-15).

Claims 9, 19, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the above rejection as applied to claims 1, 15, respectively above, and further in view of Dove et al (979) cited by applicants'.

The above combination meets the claimed invention except for the use of KQ dielectrics.

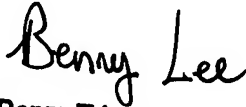
Dove et al discloses that the use of KQ dielectrics, especially in shielded coaxial multi-layer structures, is conventional in the art.

Accordingly, in view of the recognized teaching in Dove et al, it would have been obvious to have further modified the dielectric layer and mounds of the combination to have been KQ dielectric material, especially in view of the their recognized conventional use in shielded coaxial multi-layer structures, such as in the combination.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number (571)272-1764.

L  
lee/ds

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Benny T. Lee  
Primary Examiner